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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,601	02/20/2002	David B. Dwyer	H0003041	9622

128 7590 01/21/2003

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EXAMINER

SWARTHOUT, BRENT

ART UNIT	PAPER NUMBER
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2632

2

DATE MAILED: 01/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

11

Office Action Summary

Application No.

10/081,601

Applicant(s)

Dwyer et al.

Examiner

Brent A Swarthout

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-20 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 2632

OK 1. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 12 contains the exact language as claim 8 from which it depends.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 13-14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick (276).

Frederick discloses an aircraft display system comprising a display screen (Fig. 2), terrain data base input 94, weather data input (col. 7, lines 10-26), wherein weather data is displayed on 2-D on screen portion 212 (Fig. 3) and terrain is displayed on 3-D on screen portion 204/222.

Art Unit: 2632

Choosing to use a single data input stream would have been obvious to one of ordinary skill in the art, in order to simplify graphics processing, merely depending on what particular type of processor with given inputs was utilized.

Regarding claims 2-5, Frederick discloses out window display 204 with terrain relative to altitude, and juxtaposition of weather and terrain data displays (Fig. 2) to allow rapid recognition of data.

Regarding claim 14, Frederick teaches use of colors to indicate terrain height with respect to aircraft altitude (col. 8, lines 5-22).

3. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick (276) in view of Wichgers et al.

Wichgers teaches desirability in a terrain display system of sensing velocity in order to correctly display aircraft icon 36 with respect to surrounding terrain (Fig. 3; col. 4, line 65).

It would have been obvious to sense velocity, in addition to already sensed position, heading and terrain data (col. 7, lines 9-42) in a system as disclosed by Frederick, in order to more accurately display aircraft position with respect to surrounding weather and terrain.

Art Unit: 2632

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick (276) in view of Frederick (987).

Frederick (987) discloses desirability of using colors to indicate severity of weather conditions (col. 1, lines 15-25).

It would have been obvious to use colors to indicate weather severity in a system as disclosed by Frederick (276), in order that a pilot would have been able to easily determine which weather areas to avoid.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick (276) in view of Block.

Frederick teaches desirability of indicating when terrain is above aircraft altitude by special markings or flashing a color (col. 8), except for specifically stating that colors are also used to indicate when an aircraft is safe from terrain and approaching terrain.

Block teaches desirability of using red, yellow and green colors to indicate if an aircraft is safely above an obstacle, nearing an obstacle, or at an altitude that could strike the obstacle.

It would have been obvious to use three colors to indicate degree of closeness to terrain for a pilot using the display system as disclosed by Frederick, in order to allow a pilot to

Art Unit: 2632

recognize when an aircraft was safe and also when it was approaching dangerously close to terrain.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Michaelson, Frederick, Smith and Kershner disclose terrain display devices.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent Swarthout whose telephone number is (703) 305-4383. The examiner can normally be reached on M-F from 6:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu, can be reached on (703) 308-6730. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Brent Swarthout

**BRENT A. SWARTHOUT
PRIMARY EXAMINER**

BS/ayc

January 14, 2003